

Notice of Allowability

Application No.

09/787,858

Examiner

Tracy Dove

Applicant(s)

JIN ET AL.

Art Unit

1745

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 4/2/04.
2. ☒ The allowed claim(s) is/are 1,3,5-13 and 15-29.
3. ☒ The drawings filed on 22 March 2001 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☐ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Russell Toye on 6/28/04.

The application has been amended as follows:

In the Specification:

On page 4, line 26 of the specification replace "BaTiC₃" with "BaTiO₃".

In the Claims:

Amend claim 3 as follows:

3. An alkaline electrochemical battery cell comprising an anode, a cathode, a separator between the anode and cathode, and an electrolyte, wherein at least one of the anode, cathode or electrolyte contains n-type metal oxide particles as an additive and the additive is an n-type metal oxide additive as a result of incorporation of a dopant having an average particle size of 60 μm or less.

In claim 5, line 1; after "wherein the metal oxide" insert ", prior to incorporation of the dopant,".

In claim 6, line 1; after "wherein the metal oxide" insert ", prior to incorporation of the dopant,".

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In claim 8, line 1; after “wherein the metal oxide” insert “, prior to incorporation of the dopant,”.

Amend claim 10 as follows:

10. An alkaline electrochemical battery cell comprising an anode, a cathode, a separator between the anode and cathode, and an electrolyte, wherein at least one of the anode, cathode or electrolyte contains n-type metal oxide particles as an additive, and the n-type metal oxide is SnO_2 doped with a dopant selected from the group consisting of In_2O_3 , Sb_2O_5 , Nb_2O_5 , WO_3 and P_2O_5 .

In claim 11, line 1; after “wherein the n-type” insert “reduced”.

In claim 18, line 1; after “wherein the n-type” insert “reduced”.

In claim 20, line 5: after “less than 100 ohm-cm” insert “as the doped n-type metal oxide additive”.

In claim 26, line 1; after “wherein the doped” insert “n-type”.

In claim 27, line 1; after “wherein the doped” insert “n-type”.

In claim 28, line 1; after “wherein the doped” insert “n-type”.

In claim 29, line 5: after “less than 100 ohm-cm” insert “as the n-type reduced metal oxide additive”.

Allowable Subject Matter

Claims 1, 3, 5-13 and 15-29 are allowed.

The following is an examiner’s statement of reasons for allowance: the claims are directed toward a battery comprising a zinc-containing anode, a MnO_2 -containing cathode, a separator and an aqueous electrolyte. At least one of the anode, cathode or electrolyte contains

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n-type reduced metal oxide particles as an additive. In an alternative embodiment, at least one of the anode, cathode or electrolyte contains n-type doped metal oxide particles.

The prior art does not teach the claimed alkaline battery wherein at least one of the anode, cathode or electrolyte contains n-type metal oxide particles as an additive. The n-type metal oxide particles are reduced metal oxide particles or doped metal oxide particles.


Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tracy Dove whose telephone number is 571-272-1285. The examiner can normally be reached on Monday-Thursday (9:00-7:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Pat Ryan can be reached on 571-272-1292. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

June 28, 2004


Patrick Ryan
Supervisory Patent Examiner
Technology Center 1700